NON-PALINSPASTIC PALEOGEOGRAPHIC EVOLUTION OF THE BLACK AND CASPIAN SEAS

Derman, A. Sami1 and Senin, Boris V.2 1 Turkish Petroleum Corporation, Ankara, Turkey 2 Soyuzmorgeo

Pre-Cambrian is the oldest unit exposed in the western Black Sea area. During Cambrian these areas were probably subaerially exposed and were erosional areas. Stratigraphic relations and deposition of various siliciclastic sediments indicate that an irregular topography existed when Ordovician sea reached the area. Silurian sediments overlie both marine and continental sediments of Ordovician indicating irregular topography at the beginning. Devonian sediments also overlie continental and marine beds. All these have important paleogeographic implications.

Devonian transgression covered a large area from Istanbul, Camdag and Karadere areas in Turkey to Ukraine and to large areas in Russia. Sedimentologic characteristics of the sediments within Devonian and early Carboniferous indicate that there is at least 2 major sea level change following early Devonian transgression. Beginning from Visean a major deformation phase occurred which accompanied by major volcanic activity. During late Carboniferous land areas progressively increased.

During Permian most of the Black Sea areas were land areas.

During Triassic western Black Sea area is covered by a shallow sea but middle Black Sea areas were dominated by continental sediments probably indicating much pronounced topographic relief and continental deposition.

Early Jurassic marks opening of a new seaway from east (Caucasus) toward west extending into western Black Sea. This seaway continued into Middle Jurassic until when a compression deformation has closed much of the basil areas of the seaway. Late Jurassic marks development of a large carbonate platform within Black Sea area. In the eastern areas extensive carbonate deposition along continental margins are reported. Early Cretaceous is the time of the initiation of the opening of the Black Sea Basin. Early-late Cretaceous is the time of development of the island arc volcanism. Late Campanian seals the rift sequence in the Black Sea area. Mid Eocene is the time of closure of the Neo-Tahitian Ocean in these areas.